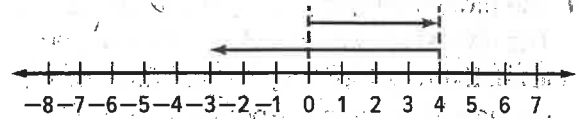


Lesson 3 Multi-Step Problem Solving

Multi-Step Example

On the first play of a football game, the quarterback ran with the football and gained 4 yards. On the next play, he lost 7 yards. The two plays are illustrated on the number line. Write a subtraction equation that represents the two consecutive plays and the net yardage. **7.NS.1, MP 4**



(A) $-4 - 7 = -3$ yards

(C) $7 - 3 = 4$ yards

(B) $4 - 7 = -3$ yards

(D) $3 - 7 = -4$ yards

Use a problem-solving model to solve this problem.

1 Understand

Read the problem. Circle the information you know.
Underline what the problem is asking you to find.

2 Plan

What will you need to do to solve the problem? Write your plan in steps.

Step 1

Determine the integer that represents the yards after the first play.

Step 2

Determine the integer that represents the yards after the second play.

Read to Succeed!



When a value is gained, it represents a positive integer. A loss represents a negative integer.

3 Solve

Use your plan to solve the problem. Show your steps.

The quarterback gained 4 yards, so the first arrow ends at 4. He then lost 7 yards, so the second arrow goes to the left 7 units. The arrow ends at -3 .

So, the subtraction equation is _____. Choice ____ is correct.

4 Check

How do you know your solution is accurate?

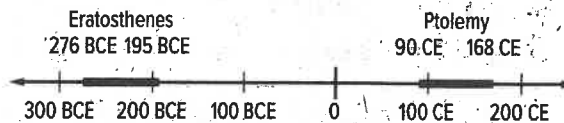
Lesson 3 *(continued)*

Use a problem-solving model to solve each problem.

- 1 The highest elevation in a city is 25 feet. The lowest elevation is 8 feet below sea level. Express the range of elevation of the city as a subtraction expression and an addition expression. **7.NS.1c, MP 4**

- (A) $25 - 8$; $25 + (-8)$
 (B) $8 - 25$; $-25 + 8$
 (C) $-8 - (-25)$; $-8 + 25$
 (D) $25 - (-8)$; $25 + 8$

- 2 Eratosthenes and Ptolemy were both mathematicians that made significant contributions in the areas of mathematics, as well as astronomy and geography. The time line below shows the estimated times they lived. Find the difference between the number of years they lived. **7.NS.1, MP 1**



- 3 Kai is working on her budget. The table below is her budget for a month. Find the amount of money Kai has left over at the end of the month. Make three suggestions that change Kai's budget and allow her to save more money each month. **7.NS.1d, MP 3**

Description	Amount (\$)
Net pay	2,000
Cable TV	220
Car insurance	74
Cell phone	175
Credit card payment	125
Electric	135
Food	400
Gym membership	90
Rent	800
Savings	50
